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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/726,636	12/04/2003	Dong-Gyu Lee	2557-000186/US	6179
30593	7590	11/18/2004	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C.			LAM, TUAN THIEU	
P.O. BOX 8910			ART UNIT	
RESTON, VA 20195			PAPER NUMBER	
			2816	

DATE MAILED: 11/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/726,636

Applicant(s)

LEE ET AL.

Examiner

Tuan T. Lam

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3-7,9,11-17,21,23-27 and 29 is/are allowed.
- 6) ☒ Claim(s) 2,8,10,18-20,22 and 28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the limitation of “a first sense amplifier (i.e. SA1)..receiving the clock signal”, “second sense amplifier (i.e. SA 2)....receiving the clock signal” of claim 6 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 2, 8, 10, 18, 20 and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 2, the recitation of "if" in lines 3 and 5 is indefinite because it is not a positive recitation. It is suggested to change "if" to --when--.

In claim 8, the recitation of "the first selection unit", "the second selection unit" lacks proper antecedent basis.

In claims 10 and 18, the recitation of "the enabling signal is activated prior to activation of the clock signal" is indefinite because it is misdescriptive. Figure 4 shows the waveform diagrams of various signals. It can be seen that the clock signal (CLK) has a rising edge activated before the rising edge of the enabling signal (ENS). Correction is required.

In claim 20, the recitation of "if" in line 2 is indefinite because it is not a positive recitation. It is suggested to change "if" to --when--.

In claim 22, the recitation of "if" in lines 3 and 5 is indefinite because it is not a positive recitation. It is suggested to change "if" to --when--.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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4. Claims 19 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Yabe (USP 5,995,430). Figure 2 of Yabe shows a data transmission unit comprising a sense amplifier (27-0) outputting a first signal in response to the input data (input to the S/A), the logic level of the first signal is the same as the logic level of the input data (sense amplifier S/A amplifies the input data and to provide two outputs one has the same logic level as the input and the other output is a complementary), a multiplexer (28-0) receiving the first signal via a first terminal and receiving a second signal (output of the other sense amplifier) generated externally from the data transmission unit via a second terminal, outputting one of the first signal and second signal as output data based on a logic level of an enabling signal (output of the column pre decoder 20) applied thereto as called for in claim 19.

Regarding claim 20, the multiplexer outputs the first signal as output data if the enabling signal is at a first logic level, and outputs the external second signal as the output data if the enabling signal is at a second logic level.

5. Claims 19 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Peterson et al. (USP 6,078,837). Figure 8 of Peterson et al. shows a data transmission unit comprising a sense amplifier (230) outputting a first signal in response to the input data (212, 214), the logic level of the first signal is the same as the logic level of the input data (the output of the sense amplifier is amplified and has the same logic level as the input signal), a multiplexer (240) receiving the first signal via a first terminal and receiving a second signal (output of the other sense amplifier) generated externally from the data transmission unit via a second terminal, outputting one of the first signal and second signal as output data based on a logic level of an enabling signal (238) applied thereto as called for in claim 19.

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Regarding claim 20, the multiplexer outputs the first signal as output data if the enabling signal is at a first logic level, and outputs the external second signal as the output data if the enabling signal is at a second logic level.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 19-20 and 28 are rejected under 35 U.S.C. 102(e) as being anticipated by Maeda (USP 6,574,163). Figure 5 of Maeda shows a data latch circuit (data being latched in the output buffer 40) having a data transmission unit comprising a sense amplifier (6-1) outputting a first signal in response to the input data (2-1), the logic level of the first signal is the same as the logic level of the input data (sense amplifier S/A amplifies the input data and to provide outputs has the same logic level as the input and the another output is a complementary), a multiplexer (10) receiving the first signal via a first terminal and receiving a second signal (output of the other sense amplifier) generated externally from the data transmission unit via a second terminal, outputting one of the first signal and second signal as output data based on a logic level of an enabling signal (CNTA) applied thereto as called for in claims 19 and 28.

Regarding claim 20, the multiplexer outputs the first signal as output data if the enabling signal is at a first logic level, and outputs the external second signal as the output data if the enabling signal is at a second logic level.

Allowable Subject Matter

7. Claims 2, 8, 10, 18 and 22 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

8. Claims 1, 3-7, 9, 11-17, 21, 23-27 and 29 are presently allowed.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan T. Lam whose telephone number is 571-272-1744. The examiner can normally be reached on Monday to Friday (7:30 am to 6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, TIMOTHY P CALLAHAN can be reached on 571-272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tuan T. Lam
Primary Examiner
Art Unit 2816

11/15/2004